

# WHAT IS CLAIMED IS:

1. An information display unit comprising:
  - a play-list information fetching section for fetching a play-list information
  - 5 concerning an order for display of a plurality of image data;
  - a switching request information fetching section for fetching a switching request information for requesting switching of image data to be displayed; and
  - a control section for controlling the display section to display image data to be displayed next according to said play-list information by fetching switching request
  - 10 information with this switching request information fetching section, wherein said control section comprises:
    - an image compression processing section for compressing the image data being currently displayed on the display section and the image data to be displayed next according to the play-list information to the state in which the image data is displayed on
    - 15 the screen display with smaller dimensions in respective directions compared to those of a normal screen display of the image data and also generating one piece of compressed image data by combining a plurality of pieces of said compressed image data so that those image data adjoin to each other along the direction in which the image data is compressed; and
    - 20 a display control section for providing controls so that said compressed image data is displayed first on said display section and then the image data to be displayed next is displayed by fetching the switching request information with said switching request information fetching section.
2. An information display unit comprising:
  - 25 a play-list information fetching section for fetching play-list information concerning a order for display of a plurality of image data;
  - a switching request information fetching section for fetching a switching request information for requesting switching of image data to be displayed; and
  - a control section for controlling the display section to display image data to be

displayed next according to the play-list information by fetching switching request information with this switching request information fetching section, wherein said control section comprises:

an image compression processing section for compressing a series of image data displayed according to an order in the play-list information of the image data displayed to the state in which the image data is displayed on the screen with smaller dimensions in respective directions compared to those of a normal screen display of the image data and also generating one piece of display image data by combining a plurality of pieces of said compressed image data so that those image data adjoin to each other along the direction in which the image data is compressed; and

a display control section for displaying said display image data as the image data displayed.

3. The information display unit according to claim 2, wherein the image compression processing section executes the processing for compressing the image data being currently displayed on the display section and the image data to be displayed next according to said play-list information to the state in which the image data is displayed on the screen display with smaller dimensions in respective direction compared to those of a normal screen display of the image data and also generating one piece of compressed image data by combining a plurality of pieces of said compressed image data so that those image data adjoin to each other along the direction in which the image data is compressed, and

the display control section provides controls, by fetching the switching request information from the switching request fetching section, so that said compressed image data is displayed first on said display section and then the display image data assigned to be displayed next is displayed.

4. The information display unit according to claim 1, wherein the control section has a tone processing section for changing the thickness in brightness at least in a portion of the compressed image data, and

the display control section provides controls, by fetching the switching request

information with the switching request fetching section, so that said compressed image data having been subjected to the tone processing by the tone processing section is displayed first on said display section and then the display image data is displayed as said image data to be displayed next.

5. The information display unit according to claim 2, wherein the control section has a tone processing section for changing the thickness in brightness at least in a portion of the compressed image data, and

the display control section provides controls, by fetching the switching request information with the switching request fetching section, so that said compressed image data having been subjected to the tone processing by the tone processing section is displayed first on said display section and then the display image data is displayed as said image data to be displayed next.

6. The information display unit according to claim 1, wherein the image compression processing section generates a plurality of pieces of compressed image data compressed at different compression ratios respectively, and

the display control section provides controls, by fetching the switching request information from the switching request information fetching section, so that said plurality of pieces of compressed image data are displayed first in the descending order of the image compression ratios, and then the image display data assigned to be displayed next is displayed.

7. The information display unit according to claim 2, wherein the image compression processing section generates a plurality of pieces of compressed image data compressed at different compression ratios respectively, and

the display control section provides controls, by fetching the switching request information from the switching request information fetching section, so that said plurality of pieces of compressed image data are displayed first in the descending order of the image compression ratios, and then the image display data assigned to be displayed next is displayed.

8. The information display unit according to claim 1, wherein information is

correlated to image data to be displayed respectively,

said information contains a plurality of pieces of lower-layer information each with image data correlated to the lower-layer; and

the display control section also displays, when image data is displayed, the image data for the lower-layer information contained in the information correlated to the displayed image data.

9. The information display unit according to claim 2, wherein information is correlated to image data to be displayed respectively,

said information contains a plurality of pieces of lower-layer information each with image data correlated to the lower-layer; and

the display control section also displays, when image data is displayed, the image data for the lower-layer information contained in the information correlated to the displayed image data.

10. The information display unit according to claim 8, wherein the play-list information fetching section can fetch the lower-layer play-list information concerning an order of image data for a plurality of pieces of lower-layer information,

the switching request information fetching sections can fetch the lower-layer switching request information for requesting the switching of image data for the lower-layer information to be displayed,

the image compression processing section compresses the image data for the lower-layer information being currently displayed and the image data to be displayed next according to said lower-layer play-list information to the state in which the image data is displayed on the screen with smaller dimensions in respective directions compared to those of a normal screen display of the image data and also generating one piece of compressed lower-layer image data by combining a plurality of pieces of said compressed image data so that those image data adjoin to each other along the direction in which the image data is compressed; and

the display control section provides controls, by fetching the lower-layer switching request information with said switching request information fetching section, so

that said lower-layer compressed image data is displayed first on said display section and then the image data for the lower-layer information to be displayed next is displayed.

11. The information display unit according to claim 9, wherein the play-list information fetching section can fetch the lower-layer play-list information concerning an order of image data for a plurality of pieces of lower-layer information,

the switching request information fetching sections can fetch the lower-layer switching request information for requesting the switching of image data for the lower-layer information to be displayed,

the image compression processing section compresses the image data for the lower-layer information being currently displayed and the image data to be displayed next according to said lower-layer play-list information to the state in which the image data is displayed on the screen with smaller dimensions in respective directions compared to those of a normal screen display of the image data and also generating one piece of compressed lower-layer image data by combining a plurality of pieces of said compressed image data so that those image data adjoin to each other along the direction in which the image data is compressed; and

the display control section provides controls, by fetching the lower-layer switching request information with said switching request information fetching section, so that said lower-layer compressed image data is displayed first on said display section and then the image data for the lower-layer information to be displayed next is displayed.

12. The information display unit according to claim 8, wherein the play-list information fetching section can fetch the lower-layer play-list information concerning a order of image data for a plurality of pieces of lower-layer information,

the switching request information fetching sections can fetch the lower-layer switching request information for requesting the switching of image data for the lower-layer information to be displayed,

the image compression processing section compresses the image data for lower-layer information sequentially displayed in said lower-layer play-list information in the image data for lower-layer information being displayed to the state in which the image

data is displayed on the screen with smaller dimensions in respective directions compared to those of a normal screen display of the image data and also generating one piece of compressed lower-layer display image data by combining a plurality of pieces of said compressed image data so that those image data adjoin to each other along the direction in  
 5 which the image data is compressed, and

the display control section displays said lower-layer display image data as image data for lower-layer information to be displayed.

13. The information display unit according to claim 9, wherein the play-list information fetching section can fetch the lower-layer play-list information concerning a  
 10 order of image data for a plurality of pieces of lower-layer information,

the switching request information fetching sections can fetch the lower-layer switching request information for requesting the switching of image data for the lower-layer information to be displayed,

the image compression processing section compresses the image data for  
 15 lower-layer information sequentially displayed in said lower-layer play-list information in the image data for lower-layer information being displayed to the state in which the image data is displayed on the screen with smaller dimensions in respective directions compared to those of a normal screen display of the image data and also generating one piece of compressed lower-layer display image data by combining a plurality of pieces of said  
 20 compressed image data so that those image data adjoin to each other along the direction in which the image data is compressed, and

the display control section displays said lower-layer display image data as image data for lower-layer information to be displayed.

14. The information display unit according to claim 12, wherein the image  
 25 compression processing section compresses the image data for lower-layer information being displayed and image data to be displayed next according to the play-list information so that the image data is displayed as a screen display with smaller dimensions compared to those of a normal screen display of the image data and also generating one piece of compressed lower-layer display image data by combining a plurality of pieces of

lower-layer compressed image data so that those image data adjoin to each other along the direction in which the image data is compressed, and

the control display section makes said switching request information section fetch the lower-layer switching request information, display said lower-layer compressed image data first and then lower-layer display image data of the image data for the lower layer information to be displayed next.

15. The information display unit according to claim 13, wherein the image compression processing section compresses the image data for lower-layer information being displayed and image data to be displayed next according to the play-list information so that the image data is displayed as a screen display with smaller dimensions compared to those of a normal screen display of the image data and also generating one piece of compressed lower-layer display image data by combining a plurality of pieces of lower-layer compressed image data so that those image data adjoin to each other along the direction in which the image data is compressed, and

the control display section makes said switching request information section fetch the lower-layer switching request information, display said lower-layer compressed image data first and then lower-layer display image data of the image data for the lower layer information to be displayed next.

16. The information display unit according to claim 10, wherein the tone processing section can execute the tone processing for generating changes in thickness at least in a portion of the lower-layer compressed image data; and

the display control section makes the switching request information fetching section fetch the lower-layer switching request information, display the lower-layer compressed image data having been subjected to the tone processing by the tone processing section first, and then display the image data to be displayed next.

17. The information display unit according to claim 11, wherein the tone processing section can execute the tone processing for generating changes in thickness at least in a portion of the lower-layer compressed image data; and

the display control section makes the switching request information fetching

section fetch the lower-layer switching request information, display the lower-layer compressed image data having been subjected to the tone processing by the tone processing section first, and then display the image data to be displayed next.

18. The information display unit according to claim 10, wherein the image  
5 compression processing section generates a plurality of pieces of lower-layer compression image data each compressed at a different compression ratio; and

the display control section makes the switching request information fetching section fetch the lower-layer switching request information, and display said plurality of pieces of lower-layer compressed image data successively in the descending order of the  
10 compression ratios on the display section first, and then the image data to be displayed next.

19. The information display unit according to claim 11, wherein the image compression processing section generates a plurality of pieces of lower-layer compression image data each compressed at a different compression ratio; and

15 the display control section makes the switching request information fetching section fetch the lower-layer switching request information, and display said plurality of pieces of lower-layer compressed image data successively in the descending order of the compression ratios on the display section first, and then the image data to be displayed next.

20 20. The information display unit according to claim 16, wherein the portion where the tone processing section carries out a tone change on compressed image data is substantially the same as the portion where the tone processing section carries out a tone change on lower-layer compressed image data.

21. The information display unit according to claim 17, wherein the portion where  
25 the tone processing section carries out a tone change on compressed image data is substantially the same as the portion where the tone processing section carries out a tone change on lower-layer compressed image data.

22. An information display method comprising the steps of:  
fetching play-list information concerning a display order of a plurality of pieces



of image data;

compressing the image data being currently displayed on the display section and the image data to be displayed next according to said play-list to the state in which the image data is displayed on the screen with smaller dimensions in respective directions

5 compared to those of a normal screen display of the image data;

generating one piece of compressed lower-layer display image data by combining a plurality of pieces of lower-layer compressed image data so that those image data adjoin to each other along the direction in which the image data is compressed; and

10 fetching the switching request information for requesting switching of image data being currently displayed to display said compressed image data first and then the image data to be displayed next.

23. An information display method comprising the steps of:

fetching play-list information concerning a display order of a plurality of pieces of image data;

15 compressing the image data displayed according to an order thereof in said play-list information to the state in which the image data is displayed on the screen with smaller dimensions in respective directions compared to those of a normal screen display of the image data;

20 generating one piece of compressed lower-layer display image data by combining a plurality of pieces of lower-layer compressed image data so that those image data adjoin to each other along the direction in which the image data is compressed; and

fetching the switching request information for requesting switching of image data to display the image data of said display image data.

24. An information display program for execution of the information display method according to claim 22.

25. An information display program for execution of the information display method according to claim 23.

26. A recording medium, according to claim 24, with the information display program recorded therein readable via arithmetic unit.

27. A recording medium, according to claim 25, with the information display program recorded therein readable via arithmetic unit .
28. An input device comprising:  
the information display unit according to claim 1; and  
5 an operating section for inputting data for the switching request information indicating that image data displayed by said information display unit in response to the input operation on the display section.
29. An input device comprising:  
the information display unit according to claim 2; and  
10 an operating section for inputting data for the switching request information indicating that image data displayed by said information display unit in response to the input operation on the display section.
30. The input device according to claim 28, wherein said operating section has a rotor; and  
15 the image compression processing section of the information display unit combines the image data compressed along a rotating direction of the rotor so that the plurality of pieces of compressed image data adjoin to each other.
31. The input device according to claim 29, wherein said operating section has a rotor; and  
20 the image compression processing section of the information display unit combines the image data compressed along a rotating direction of the rotor so that the plurality of pieces of compressed image data adjoin to each other.
32. An information processing unit comprising:  
the information display unit according claim 1; and  
25 an information processing section for processing information correlated to image data displayed by the information display unit on the display section.
33. An information processing unit comprising:  
the information display unit according claim 2; and  
an information processing section for processing information correlated to image

data displayed by the information display unit on the display section.

34. An information processing unit comprising:

the input device according claim 28; and

an information processing section for processing information correlated to image

5 data displayed by the information display unit on the display section of the input device.

35. An information processing unit comprising:

the input device according claim 29; and

an information processing section for processing information correlated to image

data displayed by the information display unit on the display section of the input device.